1. PURPOSE

The purpose of this submission is:

- To provide the NCCC with a brief background and progress on the development of the National Framework for Climate Services.
- Request inputs towards the development of the NFCS

2. BACKGROUND

South Africa’s climate has a high degree of variability at all time-scales. The degree of occurrence of severe weather events has increased in recent decades. In fact, the whole world, especially in recent years, has had to increasingly contend with the impacts of climate variability and change, particularly extreme weather and climate events. The high degree of climate variability has challenged the traditional notion that current and future weather and climate can be inferred from past climatic conditions, thus requiring extra effort from researchers, modellers and forecasters in the quest for accuracy in predictions. Communities in Developing Countries, like South Africa, are highly vulnerable and exposed to the depredations of climate change and vulnerability due to the socio-economic conditions and have low adaptive capacities. The purpose of the project to develop the National
Framework for Climate Services (NFCS) in South Africa, and it is a collaborative project between the South African Weather Services and the Department of Environmental Affairs.

The NFCS is premised on the Global Framework for Climate Services (GFCS) to conceptualized and endorsed by the World Meteorological Organization to strengthen the production, availability, delivery and application of science-based climate monitoring and prediction services. At the Sixteenth World Meteorological Congress, WMO was requested through Resolution 47 (Cg-16) to lead the development of the Implementation Plan of the GFCS, with the active involvement of the relevant stakeholders, including United Nations bodies. The GFCS addresses the entire value chain for the production and application of climate services. It consists of five components or pillars namely the User Interface Platform; Climate Services Information System; Observation and Monitoring; Research, Modelling and Prediction; and Capacity development. The GFCS is a Framework designed to mainstream climate science into decision-making at all levels and help ensure that every country and every climate-sensitive sector of society is well equipped to access and apply the relevant climate information. The overarching goal of the Framework is: To enable better management of the risks of climate variability and change at all levels, through development and incorporation of science based climate information and prediction services into planning, policy and practice.

NFCS Strategic intent

It is a Framework designed to mainstream climate science into decision-making at all levels and help ensure that every country and every climate-sensitive sector of society is well equipped to access and apply the relevant climate information. The overarching goal of the Framework is: To enable better management of the risks of climate variability and change at all levels, through development and incorporation of science based climate information and prediction services into planning, policy and practice.

The GFCS is, therefore, conceived as an integrating set of international arrangements which will be built upon the established global climate observation and research programmes as well as operational structures into an end-to-end product generation, service provision and application system. The Global Framework for Climate Services is user-need driven, as a process and includes five major components: (i) observations; (ii) climate research, modeling and prediction; (iii) a climate services information system (CSIS); (iv) a climate user interface programme (CUIP); and (v) capacity building.
Key elements of the Global Framework for climate services

The GFCS aims to enhance climate observations and monitoring, transform that information into sector-specific products and applications, and disseminate those products widely. There are five essential elements which need to be strengthened for the success of the GFCS, as presented in Figure 1:

- The **Global Climate Observing System (GCOS)** and all its components, encouraging exchange and access to climate data;
- The **World Climate Research Programme (WCRP)**, underpinned by adequate computing resources and increased interaction with other global climate research initiatives;
- **Climate Services Information Systems** taking advantage of existing national and international arrangements;
- **Climate User Interface** mechanisms focus on building linkages and integrating information between the providers and users of climate services; and
- Efficient and enduring **capacity building** through education, training and strengthened outreach and communication.
**Observation and monitoring**

The aim of this pillar is to ensure that climate observations and other data necessary to meet the needs of end users are collected, managed and disseminated and are supported by relevant metadata. The Observations and Monitoring pillar helps ensure that the climate observations necessary to meet the needs of end users are made, managed and disseminated, supported by relevant metadata.

**Users and user interface platform**

The User Interface Platform is the pillar of the Framework that provides a structured means for users, climate researchers and climate data and information providers to interact at all levels. The objective of the User Interface Platform is to promote effective decision making with respect to climate considerations by making sure that the right information, at the right time and in the right amount, is delivered, understood, and used.

**Climate Service Information System**

The Climate Services Information System is the principal mechanism through which information about climate (past, present and future) is routinely collected, stored and processed to generate products and services that inform decision-making processes, often complex, across a wide range of climate-sensitive activities and enterprises. It is the means by which research outputs and technological developments are transformed into improved operational climate information.

**Research and modelling and prediction**

The Research, Modelling and Prediction pillar fosters research towards continually improving the scientific quality of climate information, providing an evidence base for determining the impacts of climate change and variability and for evaluating the cost-effectiveness of using climate information. It supports the development and improvement of tools and methods that will facilitate the transition of research to operational climate service provision and engender practical applications of climate information.
Capacity building

The Framework is proposed as a holistic approach to enable countries, companies and individuals to benefit from the global investments that have already been made and will continue to be made in the other four pillars. Capacity Development approaches and actions identified in this implementation plan address the requirements identified in the other pillars as well as, more broadly, the basic requirements for enabling any Framework-related activities to occur sustainably.

Progress on the development of the Framework

The process towards the development of the NFCS commenced with a broader consultative workshop involving national stakeholders. The following has been achieved:

- The Roadmap for the National Implementation of the GFCS has been developed.
- The steering committee was established to strengthen the governance mechanisms.
- Scanning of the climate services landscape and the development of the draft NFCS are underway.

The process towards the finalisation of the NFCS will intensify in the 2015/16 financial year.

3. RECOMMENDATION

It is recommended NCCC notes the progress on the development of the National Framework for Climate Services and provides inputs.